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AVICENNIA GERMINANS (ACANTHACEAE) GAINING NEW GROUND IN SOUTHEAST TEXAS?

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ABSTRACT

Avicennia germinans is documented for the first time from Brazoria County in southeast Texas. It perhaps indicates an expanding range for the species in Texas.

Avicennia germinans (L.) L. (black mangrove) is a tropical and subtropical maritime shrub to small tree distributed along tidal shores from Texas to Florida, Bermuda, the Bahama Islands, both coasts of Mexico and Central America, the West Indies, and the coasts of Brazil, Peru, and West Africa (Correll & Johnston 1970; Godfrey & Wooten 1981).

The northern distributional limit of *Avicennia germinans* has been suggested to be determined by the frequency and duration of freezing temperatures (Sherrod & McMillan 1981). In the Gulf of Mexico, *A. germinans* sees its northernmost limit in Texas. Herbarium records occur from the South Texas coastal counties of Aransas, Calhoun, Cameron, Kleberg, Nueces, and San Patricio (Fig. 1) with well established stands at three sites (Sherrod & McMillan 1981). The species does not occur northward again until Galveston and Jefferson (the northernmost limit) counties in southeast Texas (Fig. 1). Although probably a waif in Jefferson County, as reported by Sherrod and McMillan (1981), Guo et al. (2009), and suggested by few herbarium collections, a well established population occurs in tidal marsh adjacent to "The Lagoon" on northeast Galveston Island (Rosen, personal observation). Outside of these two locations, the species is not documented from any others between Jackson County and the Louisiana border in southeast Texas. A specimen at TEX collected by R.J. Fleetwood on Galveston Island in 1973 indicates that "This species occurs on Bird Island, 1.5 mi W of San Luis Pass and the N end of Mud Island between West Bay and Christmas Bay [both in Brazoria Co.]"; however, we have located no herbarium specimens at BRIT, SMU, TEX, TAES, or TAMU for these sites.

Recently, floristic field work at a newly acquired 178.8 ha tract that is part of the Christmas Bay Coastal Preserve on Follets Island has yielded a collection of *Avicennia germinans*, representing the first vouchered record for Brazoria County. The site is ca. 55 kilometers southwest of the population at The Lagoon on northeast Galveston Island.

Voucher specimen. **Texas.** Brazoria Co.: Follets Island; on and N of County Road 257 (Bluewater Highway), about 10 km W of the San Luis Pass bridge, locally rare (a single individual) evergreen shrub to about 0.5 m tall in tidal salt marsh with *Spartina alterniflora*, *Batis maritima*, and *Sarcocornia utahensis,* producing many pneumatophores, 29 Jun 2014, *D.J. Rosen 6581* (TEX), *S. Zamirpour 74* (BRIT; Fig. 2a & b). Two larger shrubs were also seen adjacent to a tidal inlet nearby (Fig. 2c).

Recently, *Avicennia germinans* has been reported to be advancing northward in Louisiana (Perry & Mendelssohn 2009) and expanding in extent in populations in south Texas (Everitt et al. 2010) in response to climate change. We believe our collection reported here may be an indication of the species expanding its distribution in southeast Texas. In any case, black mangrove apparently is rare in Brazoria County.

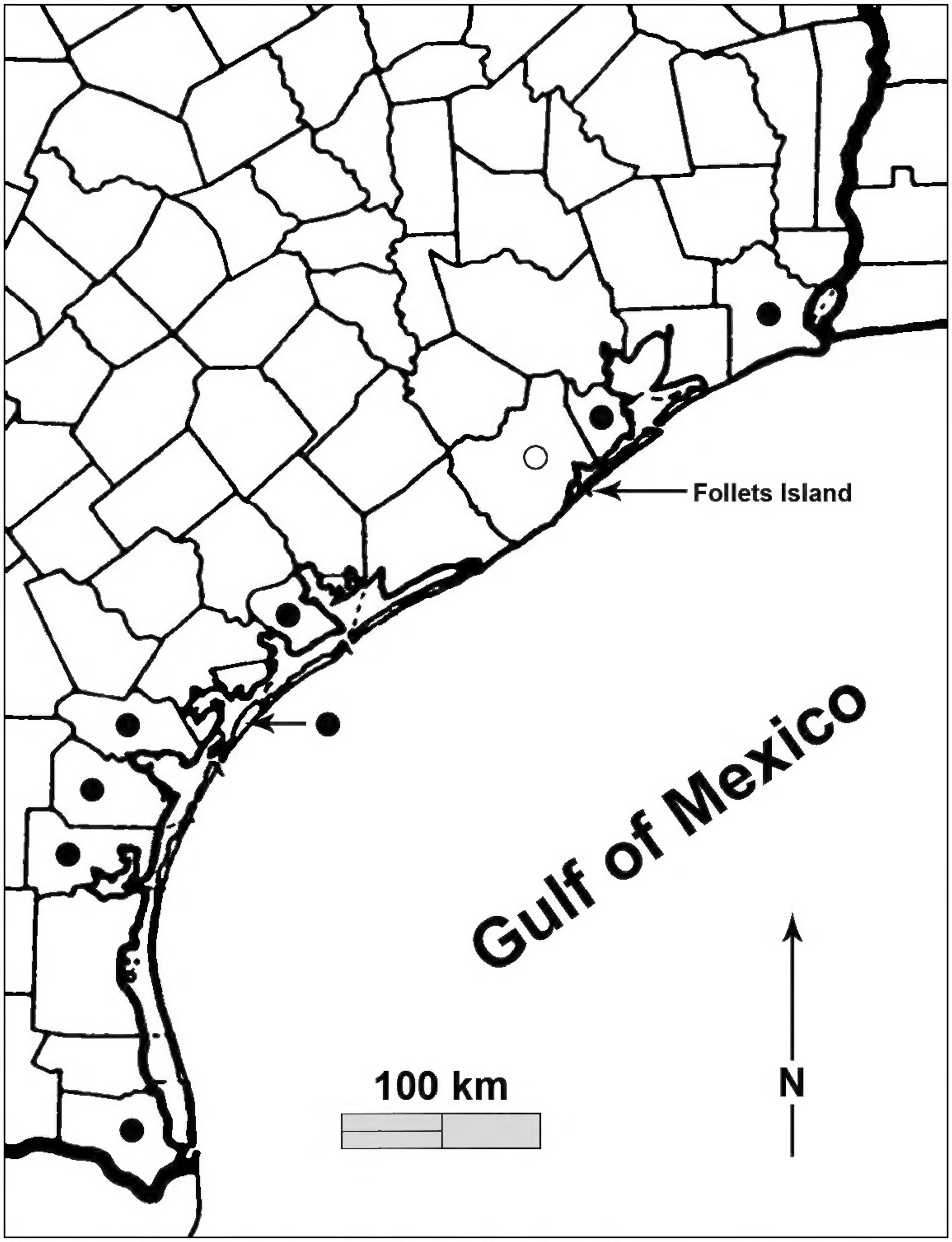

Figure 1. Distribution of *Avicennia germinans* in Texas, including previously reported (•) and a new record from Brazoria County (○).

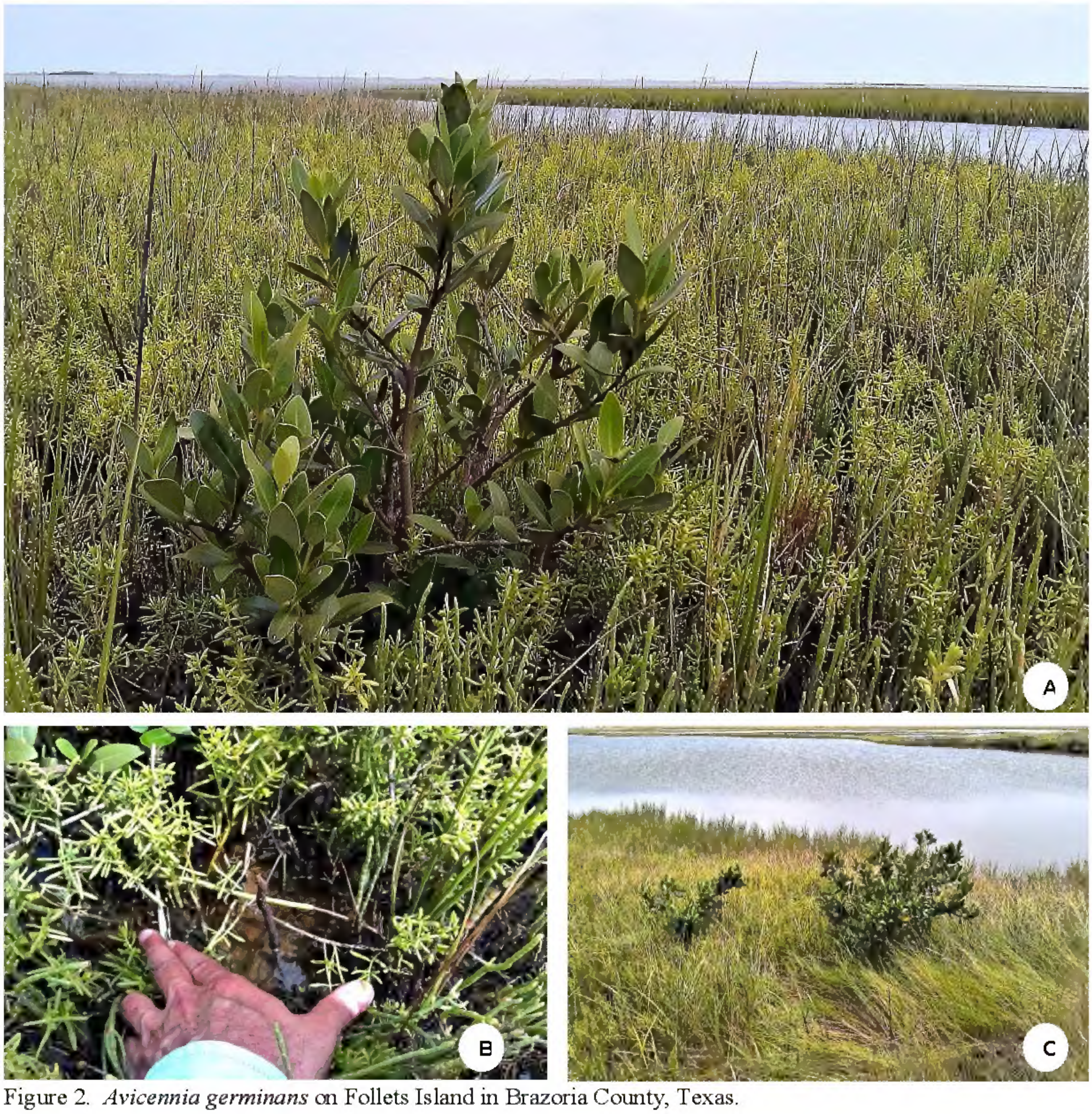

Figure 2. *Avicennia germinans* on Follets Island in Brazoria County, Texas.

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